

MeCAT[®] (Metal Coded Tags) represents the new powerful tool for the analysis of peptides and proteins in simple or complex mixtures. It's patented protein coding technique is based on labeling with metal chelates of lanthanides. It was developed to quantify relative and absolute amounts of proteins and peptides. Optionally an affinity-tag allows the separation of coded target-peptides out of a complex mixture (MeCAT-Affinity Reagent Kit).

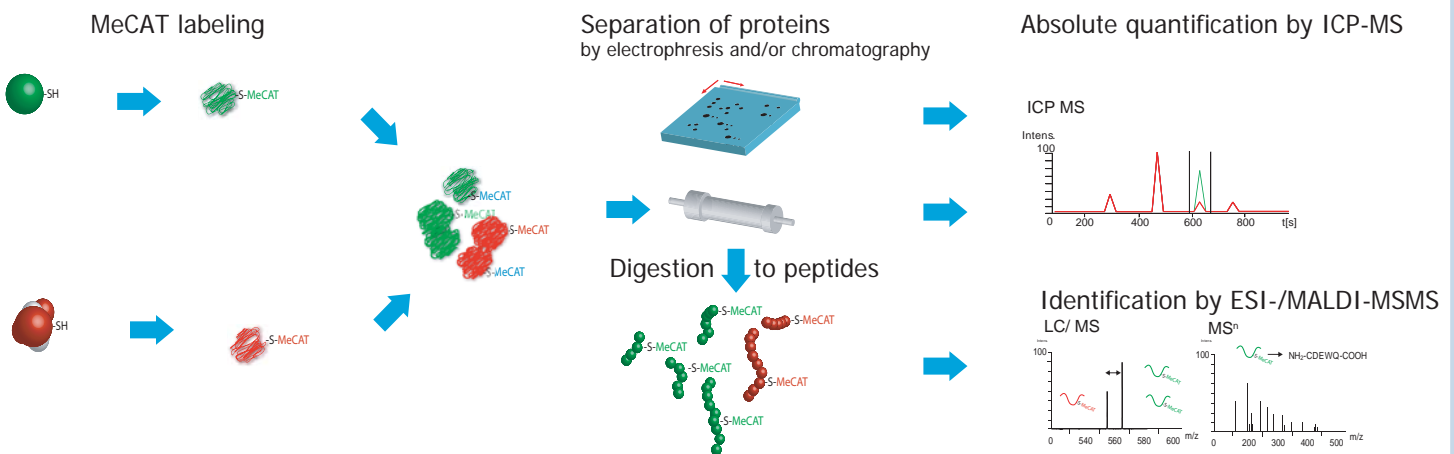
MeCAT[®] -Kit

- MeCAT reagent for 16 reactions
- Labeling buffer and components
- Two different metal tags (Duplex-kit, e.g. Lu + Tm)
- 50-100 µg protein/reaction
- MeCAT labeling protocols

How MeCAT[®] works

- Labeling of cysteines of protein/peptide samples
- Pooling
- Separation by electrophoresis & chromatography
- Quantification by ICP-MS
- Identification by ESI-MS or MALDI-MS

Overview - General Workflow



The power of MeCAT[®]

- Absolute quantification
- Detection/quantification down to attomol of protein
- Dynamic range over at least 6 orders of magnitude
- Analysis of more than one sample by multiplexing
- Affinity purification by MeCAT-Affinity Reagent Kit only

Features

- Compatible to common protein separation methods
- Compatible to MALDI-MS, ESI-MS and ICP-MS
- Differential labeling of proteins, peptides etc.
- External, protein independent calibration by metals
- Absolute quantification by ICP-MS and relative quantification by ESI-MS

References:

Deutsches Patent DE10227599, Proteome Factory AG und HU Berlin
Ahrends et al., MCP (Online), 2007

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